Glendale Unified School District

Middle and Senior High School

June 17, 2014

Department: CTE

Course Title: Environmental Careers and Practices 1-2

Course Number

Grade Level: 7-12

Semester Credits:

Recommended Prerequisite: None

Recommended Textbook: Food for Today, Gardens for Learning: Creating and Sustaining Your School Garden

Course Description: The Environmental Careers and Practices course investigates career pathways into environmentally sustainable occupations. Through college visits and guest speakers, information about educational opportunities leading to environmental careers will be presented. Students will learn about global and regional environmental issues. Students will also measure, design, build and manage a school garden. Students will be introduced to nutritional eating and healthy foods by harvesting and tasting the fruits and vegetables that they grow. Students will share their knowledge by assisting area schools with the establishment of their own gardens.

I. Standards

A. Design

1. Agriculture & Natural Resources Industry Sector Standard CTE 7.0 –

Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings: The students will:

a. Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.

b. Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

2. VAPA Standard 2.0 Creative Expression

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art. Students will solve a visual arts problem that involves the effective use of the elements of art and principles of design as they apply to landscape design.

3. VAPA Standard 5.0 Connecting and Applying What is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers.

Students will develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills, as they relate to landscape design.

4. Agriculture & Natural Resources Industry Sector Standard Ornamental Horticulture Pathway Standard F1.0

Students understand plant classification and use principles. Understand plant selection and identification for local landscape applications.

B. Environmental Issues

1. **CTE Standard 1.2 Agriculture & Natural Resources Industry Sector Science - Specific applications of Investigation and Experimentation.**

a. Students investigate science-based societal issues by researching the literature (Liquid Gold: California's Water, This Land Is Your Land, etc.), energy sources, and land and water use decisions in California.

b. Students will be provided clear research questions, suitable research methods and visual aids (documentary films, charts, graphs) to elicit and present evidence from different sources (books, articles, internet) about environmental issues.

c. Students will establish composting and recycling programs at school.

C. Career Planning and Management

1. **Agriculture & Natural Resources Industry Sector CTE Standard 3.0**

   Students understand how to make effective decisions, use career information, and manage personal career plans.

2. **Agriculture & Natural Resources Industry Sector CTE Standard 3.2**
   Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3. **Agriculture & Natural Resources Industry Sector CTE Standard 3.3**
   Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

4. **Agriculture & Natural Resources Industry Sector CTE Standard 3.5**
   Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

D. **Health, Foods & Nutrition**

1. **4.0 Hospitality, Tourism, and Recreation Pathway Standard A. Food Science, Dietetics, and Nutrition**

   Students will recognize the relationship of basic nutritional principles and concepts to the physical and emotional well being of individuals.

2. **1.3 Nutrition and Physical Activity**

   Explain the importance of variety and moderation in food selection and consumption.

3. **1.8 Nutrition and Physical Activity**

   Describe the prevalence, causes, and long-term consequences of unhealthy eating.

4. **2.1 Nutrition and Physical Activity**

   Evaluate internal and external influences that affect food choices.

5. **7.2 Nutrition and Physical Activity**

Critique one's personal diet for overall balance of key nutrients.

6. **7.3 Nutrition and Physical Activity**

   Identify strategies for eating more fruits and vegetables.

E. **Gardening and Management**

The Plant and Soil Science Pathway G covers topics such as plant classification, physiology, reproduction, plant breeding, biotechnology, and pathology. In addition, students learn about soil management, water, pests, and equipment as well as cultural and harvest practices.

1. **G6.1** Students understand soils and plant production soil types, soil texture, structure, and bulk density.

2. **G7.0** Students understand effective tillage and soil conservation management practices.

3. **G8.0** Students understand effective water management practices.

4. **G5.0** Students understand pest problems and management.

5. **G5.3** Understand the elements of conventional, sustainable, and organic production systems.

6. **G10** Students understand local crop management and production practices.

II. Sample Assessments

1. Projects

2. Quizzes

3. Presentations

4. Student developed brochures and handbooks

5. Business correspondence and proposals

III. Topics of Study – Suggested Time Distribution

A. Design- Measure area for a school garden to determine lay out. Determine types of crops to grow for nutrition. Create ornamental garden designs appropriate to our climate zone. Design raised beds that are ergonomically beneficial. Design a school garden that is aesthetically and functionally appropriate. 20%

B. Environmental Issues- Study of environmental issues such as soil pollution, global and local environmental issues, composting, recycling, global warming and each person's environmental footprint. 20%

C. Careers- Guest speakers from different areas of green careers such solar technology, environmental engineering and recycling plant management. 20%

D. Health and Nutrition- Students will taste a variety of familiar and unfamiliar fruits and vegetables. Students will discover how eating can positively or negatively affect the body. Students will understand food culture and why we eat what we eat. 20%

E. Gardening and Management- Students will be active in maintenance of beds, watering, and weeding. Students will learn pest control and plant propagation, and to plant crops in proper elements for maximum growth. 20%

IV. Recommended Materials

A. Environmental Issues handbook (a collection of materials from the city of Glendale)

B. California Education and the Environment Initiative

Additional Supplies:

A. Soil

B. Seeds

C. Gardening tools

D. Lumber

E. Containers

F. Food samples

F. DVD documentaries

G. Design supplies such as paints, brushes, measuring tape, yardstick, varnish, adhesive, large construction paper, glue sticks, drawing paper, graph paper.